	Application No.	Applicant(s)
Notice of Allowability	10/776,144	JOHNSON, MARK B.
	Examiner	Art Unit
	Gene N Auduong	2818
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT I of the Office or upon petition by the applicant. See 37 CFR 1.31	S (OR REMAINS) CLOSED in 5) or other appropriate commu RIGHTS. This application is s	this application. If not included inication will be mailed in due course. <b>THIS</b>
1. $\boxtimes$ This communication is responsive to <u>application filed Feb</u>	oruary 10, 2004.	
2. The allowed claim(s) is/are <u>1-20</u> .		
3.  The drawings filed on 10 February 2004 are accepted by	the Examiner.	
4. Acknowledgment is made of a claim for foreign priority (a) All b) Some* c) None of the:  1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority described international Bureau (PCT Rule 17.2(a)).  * Certified copies not received:	ve been received. ve been received in Applicatio	n No
Applicant has THREE MONTHS FROM THE "MAILING DATE noted below. Failure to timely comply will result in ABANDON THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		a reply complying with the requirements
5. A SUBSTITUTE OATH OR DECLARATION must be sub- INFORMAL PATENT APPLICATION (PTO-152) which gi	mitted. Note the attached EXA ves reason(s) why the oath or	AMINER'S AMENDMENT or NOTICE OF declaration is deficient.
6. CORRECTED DRAWINGS ( as "replacement sheets") may (a) including changes required by the Notice of Draftsper 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examine Paper No./Mail Date  Identifying indicia such as the application number (see 37 CFR each sheet. Replacement sheet(s) should be labeled as such in	rson's Patent Drawing Review  r's Amendment / Comment or  1.84(c)) should be written on the	in the Office action of ne drawings in the front (not the back) of
7. DEPOSIT OF and/or INFORMATION about the department attached Examiner's comment regarding REQUIREMEN		
<ul> <li>Attachment(s)</li> <li>1.</li></ul>	6. Interview S Paper No./ (/08), 7. Examiner's	formal Patent Application (PTO-152) ummary (PTO-413), 'Mail Date Amendment/Comment  Statement of Reasons for Allowance
·		Gene N Auduong Primary Examiner Art Unit 2818

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## **DETAILED ACTION**

## Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on May 25, 2004 and September 21, 2004 is being considered by the examiner.

## Allowable Subject Matter

- 2. Claims 1-20 are allowed.
- The following is an examiner's statement of reasons for allowance: The prior art does not teach or fairly disclose a hybrid multi-bit magnetoelectronic memory device as claimed, comprising: a plurality of separate magnetic spin based memory elements situated on a semiconductor and storing a bit of data in the form of an electron spin state associated with a ferromagnetic layer, so that a plurality of data bits can be stored in the magnetic memory elements in the form of a plurality of separate electron spin states; further wherein the magnetic spin based memory elements are arranged in a stack on the semiconductor substrate and configured so that all of the separate electron spin states can be read out at the same time.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene N Auduong whose telephone number is (571) 272-1773.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GA October 27, 2004

> Gene N Auduong Primary Examiner Art Unit 2818